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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,605	07/03/2003	David DeRogatis	RAILWA 3.0-001	7300
23562 7590 01/16/2007 BAKER & MCKENZIE LLP PATENT DEPARTMENT 2001 ROSS AVENUE SUITE 2300 DALLAS, TX 75201			EXAMINER GARCIA, ERNESTO	
			ART UNIT 3679	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/16/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/613,605

Applicant(s)

DEROGATIS ET AL.

Examiner

Ernesto Garcia

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,6-8,11-17,29-34 and 49-64 is/are pending in the application.
- 4a) Of the above claim(s) 6,12,14-17 and 29-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,7,8,11,13 and 49-64 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 November 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 28, 2006 has been entered.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Election and Restriction***

Claims 6, 12, 14-17, and 29-34 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention and species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on May 13, 2005.

***Drawings***

The drawings were received on November 28, 2006. These drawings are not acceptable because they introduce new matter. Note that the original drawings show a distinct plug fastener in Figures 13A, 14, and 15-17 (see attachment for elected species) than the drawings filed on November 28, 2006 and February 4, 2004, which have not been approved. Note that the differences between the corresponding plug fasteners are drastic. The original filed drawings show the plug fastener in Figures 15-17 with ridges projecting out of the exterior surface of the sphere, as also described at original paragraph 055, lines 11-15. The current Figures 15, 15A-15D, 16 and 21 now show the ridges being internal of the exterior surface of the sphere. Further, the ridges on the original plug fasteners in Figures 13A and 14 show the ridges being triangular and pointing toward each other from either portion. The new Figures 13A and 14A show the ridges being straight and not triangular.

***Specification***

The disclosure is objected to because of the following informalities:

in amended paragraph 0058, reference to Figure 200A, in line 4, is not accurate since no such figure exists. Appropriate correction is required.

***Claim Objections***

Claim 52 is objected to because of the following informalities:

regarding claim 52, "plastics" in line 2 should be --plastic--. Appropriate correction is required. For purposes of examining the instant invention, the examiner has assumed these corrections have been made.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 8, 11, 13, 49-64 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claims 1 and 57, the recitations "ridges comprising parallel rectilinear sidewalls" in claim 1, lines 2 and 3, and claim 57, lines 4 and 7, are not supported by the written description requirement. Note that although the current drawings show this feature, the applicants cannot rely on these drawings to find support since the current

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drawings show different types of ridges as compared to the original drawings filed with the application on July 7, 2003. See attachment. Note that originally, the ridges were triangular and the ridges of a first portion were directed towards the ridges of a second portion. Accordingly, these new limitations do not comply with the written description.

Regarding claim 49, the recitation "at least one of said first ridges comprises an end slanted in a direction opposite than a direction an end of at least one of said second ridges is slanted, and at least one of said second ridges comprises an end slanted in a direction opposite than the direction the end of the at least one of said first ridges is slanted" in lines 1-4 is not supported by the original disclosure. Note that the original filed drawings contained triangular pointed ends and thus not tapered ends as submitted in the drawings filed on February 4, 2004, which have not been approved. See attachment. Accordingly, this subject matter does not comply with the written description.

Regarding claim 61, the recitation "ends of the first and second ridges are tapered respectively from the first and second openings towards a maximum diameter of the plug fastener" in lines 1-3 is not supported by the original disclosure. Note that the original filed drawings contained triangular pointed ends and thus not tapered ends. See attachment. Accordingly, this limitation does not comply with the written description.

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Regarding claims 8, 11, 13, 50-56, the claims depend from claim 1 and therefore do not comply with the written description requirement.

Regarding claims 58-60 and 62-64, the claims depend from claim 57 and therefore do not comply with the written description requirement.

Claims 7, 8, and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 7, it is unclear what is "moving away"? Are the ridges moving away? It appears that the ridges are located away from an equator instead of moving away.

Regarding claim 8, the recitation "said first engaging portion has a shape selected from the group consisting of spheroidal", in lines 1-2, is misdescriptive with respect to the elected species. Note that the first portion is a truncated hemisphere instead of spheroidal as a ball.

Regarding claim 13, note that the rejection to claim 8, above, also applies to the second engaging portion recited in lines 1-2.

***Claim Rejections - 35 USC § 102***

Claims 1, 7, 8, 13, 49, and 54 are rejected under 35 U.S.C. 102(b) as being anticipated by Abukawa, 5,392,582.

Regarding claim 1, Abukawa discloses, in Figure 6a, a plug fastener 1 comprising a first engaging portion **A1** (see marked-up attachment) and a second engaging portion **A2**. The first engaging portion **A1** has first ridges **2**. The second engaging portion **A2** has second ridges **2**. The first ridges **2** and the second ridges **2** extend parallel with respect to each other. An aperture **A3** extends through the plug fastener 1. The first ridges **2** and the second ridges **2** are concentric with respect to the aperture **A3**.

Regarding claim 7, pairs of corresponding ridges **2** from the first portion and the second portion provide symmetrical decreasing widths of the plug fastener away from an equator of the plug fastener perpendicular to the aperture **A3** (see Figure 6a).

Regarding claim 8, the first engaging portion **A1** has a shape selected from a group consisting spheroidal, cylindrical, ellipsoidal, conical, elliptic conical frustum, pyramidal frustum, and ball.

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Regarding claim 13, the second engaging portion **A2** has a shape selected from a group consisting spheroidal, cylindrical, ellipsoidal, conical, elliptic conical frustum, pyramidal frustum, and ball.

Regarding claim 49, at least one of the first ridges **2** comprises an end slanted in a direction opposite than a direction an end of at least one of the second ridges **2** is slanted, and at least one of the second ridges **2** comprises an end slanted in a direction opposite than the direction the end of the at least one of the first ridges is slanted (see Figure 4).

Regarding claim 54, the plug fastener further comprising a fastening device **6b** disposed within the aperture **A3**.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 8, 11, 13, 50-60, 62-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harder, 6,932,329, in view of Lautenschlager, 5,308,205.

Regarding claim 1, Harder discloses, in Figures 7 and 8, a plug fastener **23** comprising a first engaging portion **A1** and a second engaging portion **A2**. The first engaging portion **A1** has first ridges **37,38**. The second engaging portion **A2** has second ridges **39,40**. An aperture **41** extends through the plug fastener **23**. The first ridges **37,38** and the second ridges **39,40** are concentric with respect to the aperture **41**. However, Harder fails to disclose the first ridges **37,38** and the second ridges **39,40** comprising parallel rectilinear sidewalls and the sidewalls extending parallel with respect to one another. Lautenschlager teaches, in Figure 3, first ridges and second ridges **20** having parallel rectilinear sidewalls extending parallel with respect to one another as part of a design choice for storing spring force so that the ridges return into their initial flat state (col. 4, lines 62-64). Therefore, as taught by Lautenschlager, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the ridges of Harder with any known ridge design so that the ridges return to their initial flat state using rectilinear sidewalls extending parallel with respect to one another.

Regarding claim 8, the first engaging portion has a shape being a truncated hemisphere.

Regarding claims 11 and 58, the first ridges and the second ridges are deformable ridges.

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Regarding claim 13, the second engaging portion has a shape being a truncated hemisphere.

Regarding claims 50 and 59, the first ridges and the second ridges, as modified, have sufficient resiliency.

Regarding claims 51 and 60, the fastener is non-metallic.

Regarding claim 52, the fastener comprises a material selected from plastic.

Regarding claim 53, the aperture **41** further comprises at least one countersink **42** formed at one end of the aperture **41**.

Regarding claims 54 and 63, the plug fastener **23** further comprises a fastening device **24** disposed within the aperture **41** (see Figure 5).

Regarding claims 55 and 64, the fastening device **24** is a screw.

Regarding claim 56, the first engaging portion and the second engaging portion define a substantially spheroidal shape.

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Regarding claim 57, Harder discloses in Figures 6 and 7, a substantially plug fastener **23** comprising an aperture **41**, a first hemisphere **A1**, and a second hemisphere **A2**. The aperture **41** extends through the plug fastener and has a first opening **A7** and a second opening **A8**. The first hemisphere **A1** has first ridges **37,38** concentric and orthogonal with respect to the aperture **41**. The first hemisphere **A1** includes the first opening **A7**. The second hemisphere **A2** has second ridges **39,40** concentric and orthogonal with respect to the aperture **41**. The second hemisphere **A2** includes the second opening **A8**. However, Harder fails to disclose the first ridges **37,38** and the second ridges **39,40** comprising parallel rectilinear sidewalls and the sidewalls extending parallel with respect to one another. Lautenschlager teaches, in Figure 3, first ridges and second ridges **20** having parallel rectilinear sidewalls extending parallel with respect to one another as part of a design choice for storing spring force so that the ridges return into their initial flat state (col. 4, lines 62-64). Therefore, as taught by Lautenschlager, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the ridges of Harder with any known ridge design so that the ridges return to their initial flat state using rectilinear sidewalls extending parallel with respect to one another.

Regarding claim 62, the aperture **41** further comprises at least one countersink **42** formed in the first opening.

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Claims 1, 7, 8, 11, 13, 50-52, 54, 56-60, and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rapata, 3,539,234, in view of Lautenschlager, 5,308,205.

Regarding claim 1, Rapata discloses, in Figure 16, a plug fastener **10d** comprising a first engaging portion **A1** (see marked-up attachment) and a second engaging portion **A2**. The first engaging portion **A1** has first ridges **14h**. The second engaging portion **A2** has second ridges **14h**. The first ridges **14h** are slanted with respect to the second ridges **14h**. An aperture **A3** extends through the plug fastener. The first ridges **14h** and the second ridges **14h** are concentric with respect to the aperture **A3**. However, Rapata fails to disclose the first ridges and the second ridges comprising parallel rectilinear sidewalls and the sidewalls extending parallel with respect to one another. Lautenschlager teaches, in Figure 3, first ridges and second ridges **20** having parallel rectilinear sidewalls extending parallel with respect to one another as part of a design choice for storing spring force so that the ridges return into their initial flat state (col. 4, lines 62-64). Therefore, as taught by Lautenschlager, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the ridges of Harder with any known ridge design so that the ridges return to their initial flat state using rectilinear sidewalls extending parallel with respect to one another.

Regarding claim 7, pairs of corresponding ridges from the first portion and the second portion provide symmetrical decreasing widths of the plug fastener away from an equator of the plug fastener that is perpendicular to the aperture.

Regarding claim 8, the first engaging portion has a shape selected from a group consisting spheroidal, cylindrical, ellipsoidal, conical, elliptic conical frustum, pyramidal frustum, and ball.

Regarding claim 11, the first ridges **14d** and the second ridges **14d** are deformable ridges.

Regarding claim 13, the second engaging portion has a shape selected from a group consisting spheroidal, cylindrical, ellipsoidal, conical, elliptic conical frustum, pyramidal frustum, and ball.

Regarding claim 50, given the modification, the first ridges **14h** and the second ridges **14h** have sufficient resiliency.

Regarding claims 51 and 60, the fastener is non-metallic.

Regarding claim 52, the fastener comprises plastic (see cross-sections in Figures 1, 3, 7, and 15).

Regarding claim 54, the plug fastener **10h** further comprises a fastening device **40** disposed within the aperture (see Figure 1).

Regarding claim 56, the first engaging portion **A1** and the second engaging portion **A2** define a substantially spheroidal shape.

Regarding claim 57, Rapata discloses in Figure 16, a substantially plug fastener **10h** comprising an aperture **A3**, a first hemisphere **A1**, and a second hemisphere **A2**. The aperture **A3** extends through the plug fastener and has a first opening **A7** and a second opening (below opposite to **A7**). The first hemisphere **A1** has first ridges **14d** concentric and orthogonal with respect to the aperture **A3**. The first hemisphere **A1** includes the first opening **A7**. The second hemisphere **A2** has second ridges **14h** concentric and orthogonal with respect to the aperture **A3**. The second hemisphere **A2** includes the second opening. Ends of the first ridges **14h** and the second ridges **14h** are tapered respectively from the first opening and the second opening towards a maximum diameter of the fastener **10h** (note that the ridges are curved such that half of the curved is tapered towards the maximum diameter). However, Rapata fails to disclose the first ridges and the second ridges comprising parallel rectilinear sidewalls and the sidewalls extending parallel with respect to one another. Lautenschlager teaches, in Figure 3, first ridges and second ridges **20** having parallel rectilinear sidewalls extending parallel with respect to one another as part of a design choice for

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storing spring force so that the ridges return into their initial flat state (col. 4, lines 62-64). Therefore, as taught by Lautenschlager, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the ridges of Harder with any known ridge design so that the ridges return to their initial flat state using rectilinear sidewalls extending parallel with respect to one another.

Regarding claim 58, the first ridges **14h** and the second ridges **14h** are deformable ridges (col. 5, lines 22-30).

Regarding claim 59, the first ridges **14h** and the second ridges **14h** have sufficient resiliency.

Regarding claim 63, the plug fastener further comprises a fastening device **40** disposed within the aperture **A3**.

Claims 1, 7, 8, 11, 13, 49, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Waldron, 3,438,659, in view of Lautenschlager, 5,308,205.

Regarding claim 1, Waldron discloses, in Figure 14, a plug fastener **42** comprising a first engaging portion and a second engaging portion. The first engaging portion has first ridges **47**. The second engaging portion has second ridges **47**. An aperture **A3** (see marked-up attachment provided in the last Office action) extends through the plug fastener **42**. The first ridges **47** and the second ridges **47** are

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concentric with respect to the aperture **A3**. However, Waldron fails to disclose the first ridges and the second ridges comprising parallel rectilinear sidewalls and the sidewalls extending parallel with respect to one another. Lautenschlager teaches, in Figure 3, first ridges and second ridges **20** having parallel rectilinear sidewalls extending parallel with respect to one another as part of a design choice for storing spring force so that the ridges return into their initial flat state (col. 4, lines 62-64). Therefore, as taught by Lautenschlager, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the ridges of Waldron with any known ridge design so that the ridges return to their initial flat state using rectilinear sidewalls extending parallel with respect to one another.

Regarding claim 7, pairs of corresponding ridges **47** from the first portion and the second portion provide symmetrical decreasing widths of the plug fastener away from an equator of the plug fastener that is perpendicular to the aperture **A3**.

Regarding claim 8, the first engaging portion has a shape selected from a group consisting spheroidal, cylindrical, ellipsoidal, conical, elliptic conical frustum, pyramidal frustum, and ball.

Regarding claim 11, given the modification, the first ridges **47** and the second ridges **47** are deformable ridges.

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Regarding claim 13, the second engaging portion has a shape selected from a group consisting spheroidal, cylindrical, ellipsoidal, conical, elliptic conical frustum, pyramidal frustum, and ball.

Regarding claim 49, at least one of the first ridges **47** comprises an end slanted in a direction opposite than a direction an end of at least one of the of the second ridges **47** is slanted.. At least one of the second ridges **47** comprises an end slanted in a direction opposite than the direction the end of the at least one of the first ridges **47** is slanted.

Regarding claim 50, the first ridges **47** and the second ridges **47** have sufficient resiliency.

### ***Response to Arguments***

Applicants' arguments with respect to claims 1, 7, 8, 11, 13 and 49-64 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernesto Garcia whose telephone number is 571-282-

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7083. The examiner can normally be reached from 9:30-5:30. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached at 571-272-7087.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



E.G.

January 8, 2007

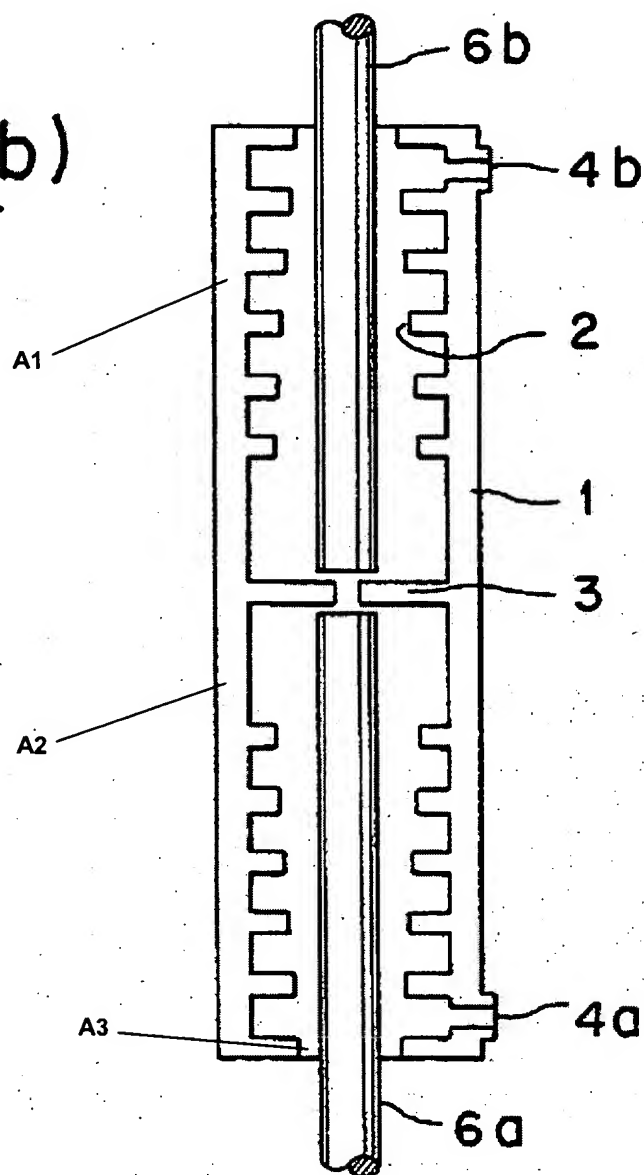
DANIEL P. STODOLA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600

Attachments: one marked-up page of Abukawa, 5,392,582  
one marked-up page of Rapata, 3,539,234  
one page of applicants' original filed drawings showing a triangular ridge

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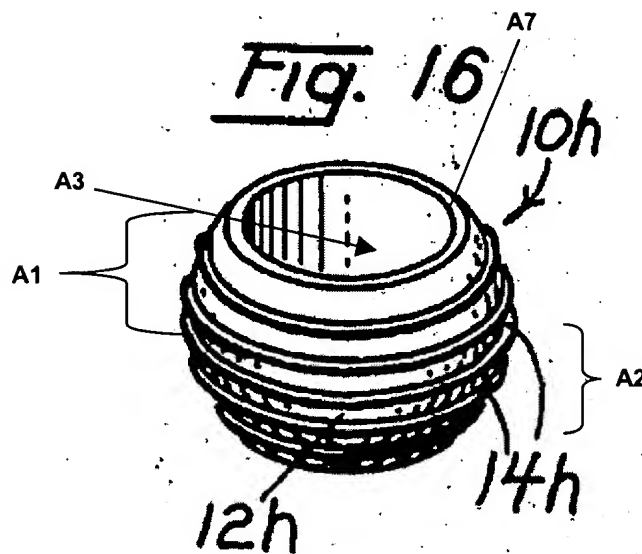
Abukawa, 5,392,582

FIG. 6(b)  
PRIOR ART



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Rapata, 3,539,234



Sheet 7 of 8

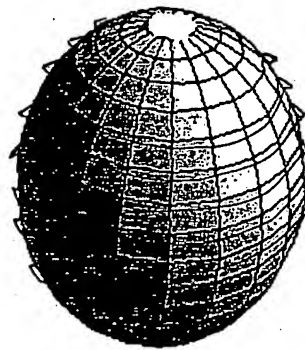
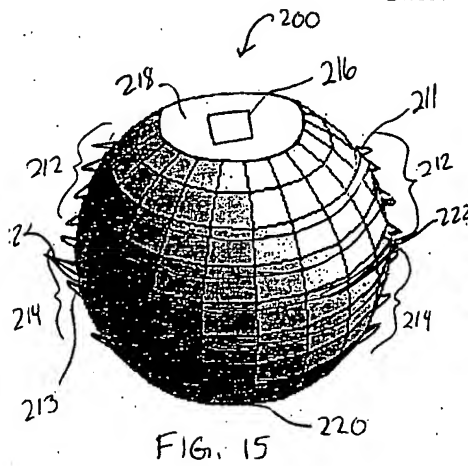


FIG. 16

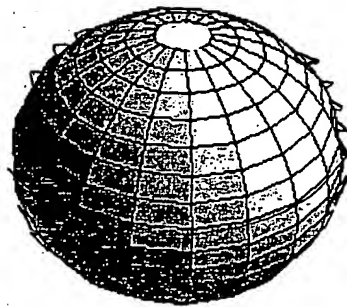


FIG. 17